

ABB BALDOR RELIANCE III

Customer information packet

SUM72006-4

20HP, 1170RPM, 3PH, 60HZ, 250TY, XPNV, V1

Class - CLI GP C,D

Division - Not Applicable

Specifications

Enclosure	XPNV
Frame	250TY
Frame Material	Iron
Frequency	60.00 Hz
Haz Area Class and Group	CLI GP C,D
Haz Area Division	Not Applicable
Motor Letter Type	Three Phase
Phase	3
Agency Approvals	CCSA US
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Cable Length	25 FOOT
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Haz Area Temp Code	T3C
Heater Indicator	No Heater
Insulation Class	F
Inverter Code	Not Inverter
IP Rating	IP68
KVA Code	G
Lifting Lugs	Standard Lifting Lugs
Motor Standards	NEMA
Motor Type	M
Mounting Arrangement	V1
Number of Poles	6
Product Family	Pump - Centrifugal
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Service Factor	1.15
Shaft Diameter	1.750 IN
Shaft Rotation	Reversible

Part Detail

Revision	E
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	85274
Layout	619738-005
Eff. date	12-10-2024
CD Diagram	416820-036
Poles	///
Leads	
Proprietary	False
Created date	05-21-2021

Shaft Slinger Indicator	No Slinger
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Winding	Normally Closed Thermostat

Nameplate

000613007MS									
CAT.NO.	SUM72006-4			SPEC NO.	S25-CWS0-0006				
SER.NO.				FRAME SIZE	250TY				
CONSTANT HP RPM	HP	RPM	VOLTS	AMPS	HZ		S.F.		
	20	1170	230/460	58/29		6-60	1.00		
	20	1170	230/460	58/29		60	1.15		
		@		HZ	CODE	G			
	TYPE	P	INSUL.CLASS	F	TORQUE	10:1_VT		DESIGN	B
	D.E. BRG.	60BC03JPP30A			ENCL	TENV	DUTY	15 MIN	PH
O.D.E. BRG.	40BC02JPG30A			MOTOR WEIGHT			AMB	40	
	FINAL CONN VOLTAGE = 460 *15								
	MIN IN AIR ;SUB. IN SEWAGE /								
	WATER ONLY								

000613007RC			
CLASS I GROUP	C D X	NO.	
CLASS II GROUP	X X X		
OPERATING TEMP CODE	T3C		

000692000MB	
SUITABLE FOR OPERATION ON PWM	
INVERTER EQUIPPED WITH IGBT	
DEVICES AND CAPABLE OF	
CARRIER	
FREQUENCY OF 2 KHZ MINIMUM	

000613007MS

CAT.NO.	SUM72006-4		SPEC NO.		S25-CWS0-0006				
	SER.NO.		FRAME SIZE		250TY				
	HP	RPM	VOLTS	AMPS	HZ	S.F.			
	20	1170	230/460	58/29	6-60	1.00			
	20	1170	230/460	58/29	60	1.15			
	CONSTANT HP RPM		@	HZ	CODE	G			
	TYPE	P	INSUL.CLASS	F	TORQUE	10:1_VT	DESIGN	B	
	D.E. BRG.	60BC03JPP30A		ENCL	TENV	DUTY	15 MIN	PH	3
	O.D.E. BRG.	40BC02JPG30A		MOTOR WEIGHT			AMB	40	
	FINAL CONN VOLTAGE = 460 *15								
MIN IN AIR ;SUB. IN SEWAGE /									
WATER ONLY									

Parts List

Part number	Description	Quantity
SA393815	SA S25-CWS0-0006	1.000 ea
RA384493	RA S25-CWS0-0006	1.000 ea
424476003WL	WIRING DIAGRAM MEDIUMA	1.000 ea
424476003WL	WIRING DIAGRAM MEDIUMA	1.000 ea
000901001AA	LABEL WARNING	1.000 ea
000692000EJ	NAME PLATE	1.000 ea
000692000WC	WARNING FLAMMABLE VAPORS MAY BE PRESENT	2.000 ea
000613007MS	NP, MEDIUM AC,INVERTER DUTY CSA,STD INDU	1.000 ea
000901001AA	LABEL WARNING	1.000 ea
000613007RC	C UL US NAMEPLATE FOR HAZARDOUS LOC	1.000 ea
000692000MB	BALDOR RELIANCE MOTOR DATA NAMEPLATE	1.000 ea
000613007MS	NP, MEDIUM AC,INVERTER DUTY CSA,STD INDU	1.000 ea
034692002AE	HCSPP 1/4" 304 S.S.	1.000 ea
088209001AB	BRKT,DE,250SUB 88209-1WCD	1.000 ea
004824015A	GREASE POLYREX EM	0.200 lb
032018014DG	HHCS1/2-13X1-3/4 3165SS	4.000 ea
421900168FU	ORING	1.000 ea
004824018AF	SHELL ROTELLA OIL 10W	1.000 lb
603762001AA	LABRYNTH BLKT	1.000 ea
413480001R	RESISTOR ASSEMBLY-BLANKET	1.000 ea
413412006T	LEAD WIRE ASSY	1.000 ea
413412004A	SUBM MOISTURE PROBE	2.000 ea
421900168FU	ORING	1.000 ea
088211001AA	PLTE 250 88211-1WB	1.000 ea
032130010DC	HSNCS 1/2-13X1-1/4 304SS	4.000 ea
032620020JD	HSSS 10-24X5/8L 304S.S.	1.000 ea
421900168FU	ORING	1.000 ea
088210001AB	BRKT,DE,250SUB 88210-1WB	1.000 ea
032018014DG	HHCS1/2-13X1-3/4 3165SS	4.000 ea
032018008BG	HHCS 5/16-18X1 316 SS	3.000 ea
064262012D	SEAL - Mech Ceramic Seal	1.000 ea

034141225AC	RING, RETAINING	1.000 ea
034692003AE	PPLG 3/8" 304 S.S.	2.000 ea
047174005D	SNAP RING	1.000 ea
064262012E	SEAL	1.000 ea
032080003JB	HWHMS 10-24X3/8L PLTED	4.000 ea
032080003LB	HWHMS 1/4-20X3/8L PLTED	6.000 ea
415031017B	NUT W/WASHER 1/4-20 C.P	6.000 ea
047024003E	TERMINAL LUG	9.000 ea
700385014P	CCA #2 25' 210/250	1.000 ea
415031017A	NUT W/WASHER 10-24 C.PLT	4.000 ea
421900092FU	ORING	1.000 ea
032018010CG	HHCS 3/8-16X1-1/4L 316SS	4.000 ea
032018006BM	HHCS 5/16-18X3/4 PLTGRN.	1.000 ea
032018006BM	HHCS 5/16-18X3/4 PLTGRN.	1.000 ea
034036013AB	LCKW 5/16 EXT.TOOTH LCKW	1.000 ea
047024003AH	T/LUG AMP 34112	4.000 ea
609181014D	HEAT SHRINK TUBING 3/4	10.000 ea
004824007K	SPECIAL PAINT	0.100 ea
033775004EA	DRSCR #6-1/4 304 S.S.	8.000 ea
034180018FD	KEY 3/8X3/8X2-1/4L 303SS	1.000 ea
B3630-9	SUBM THERMOSTAT TAG	1.000 ea
B-3664002	TAG, (NON REGREASABLE)	1.000 ea

AC induction motor performance data

Record #85274 - Typical performance - not guaranteed values

Winding	09WGA0211
Type	0948M
Enclosure	XPNV

Nameplate data

Rated Output	20		
Volts	230/460		
Full Load Amps	58/29		
R.P.M.	1170		
Hz	60	Phase	3
KVA Code	G		
S.F.	1.15		
NEMA Nom. Eff.	88.5	Power Factor	73
Duty	15 MIN		
S.F. Amps			

460 V, 60 Hz:

High Voltage Connection

Full Load Torque	89.69 LB-FT
Start Configuration	direct on line
Breakdown Torque	214 LB-FT
Pull-up Torque	102 LB-FT
Locked-rotor Torque	138 LB-FT
Starting Current	150 A
No-load Current	16.6
Line-line Res. @ 25°C	0.64 Ω
Temp. Rise @ Rated Load	74°C
Temp. Rise @ S.F. Load	94°C
Locked-rotor Power Factor	28.4
Rotor inertia	3.86 LB-FT ²

Load Characteristics 460 V, 60 Hz, 20 HP

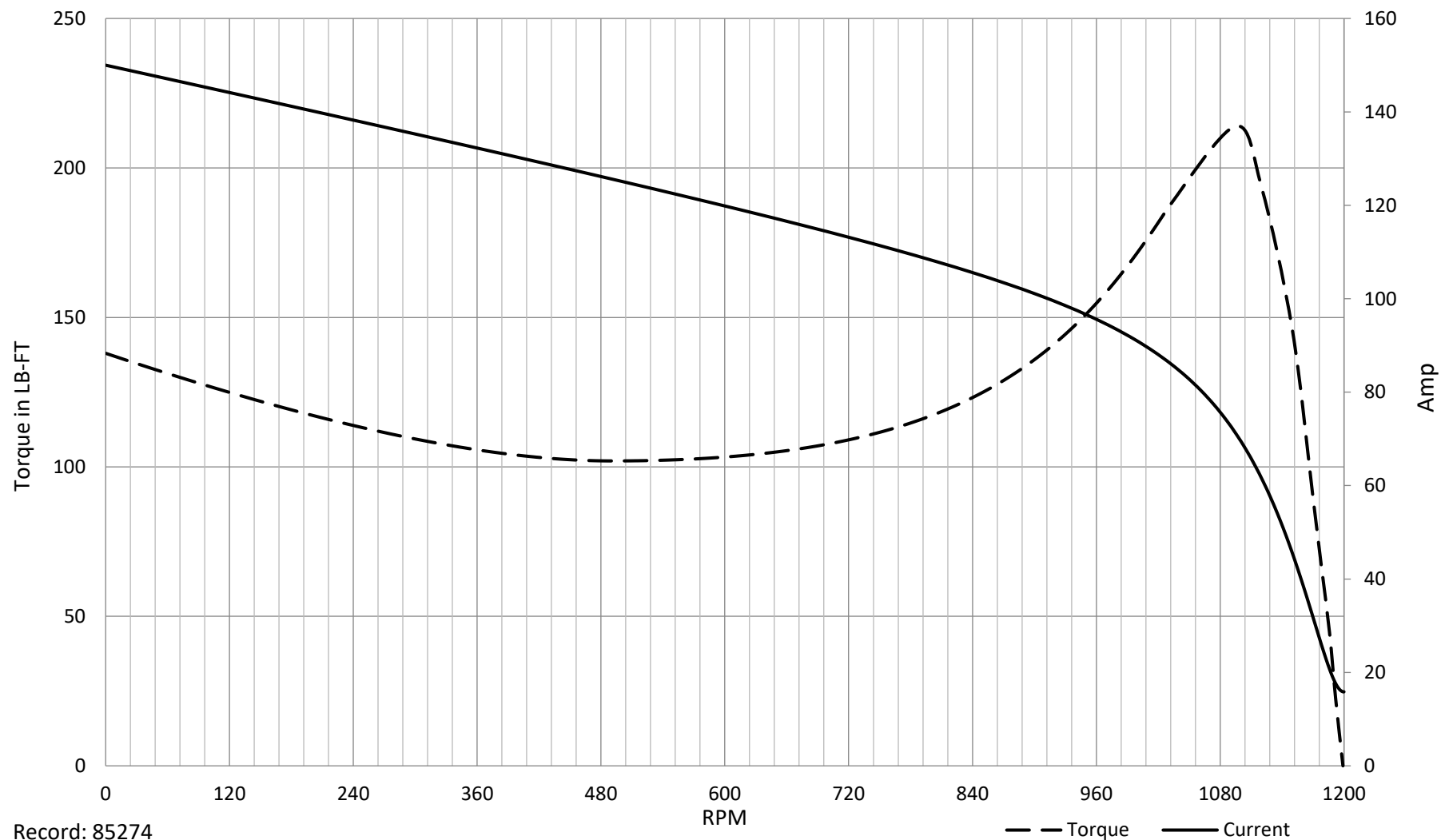
% of Rated Load	NL	25	50	75	100	125	150	SF
Power Factor	4	31	50	61	67	68	67	73
Efficiency	0	84.2	89	89.3	88.6	86.7	83.8	87.6
Speed	1199	1192	1186	1178	1170	1158	1143	1164
Line amperes	16.6	17.9	20.97	25.84	31.58	39.16	48.97	33.5

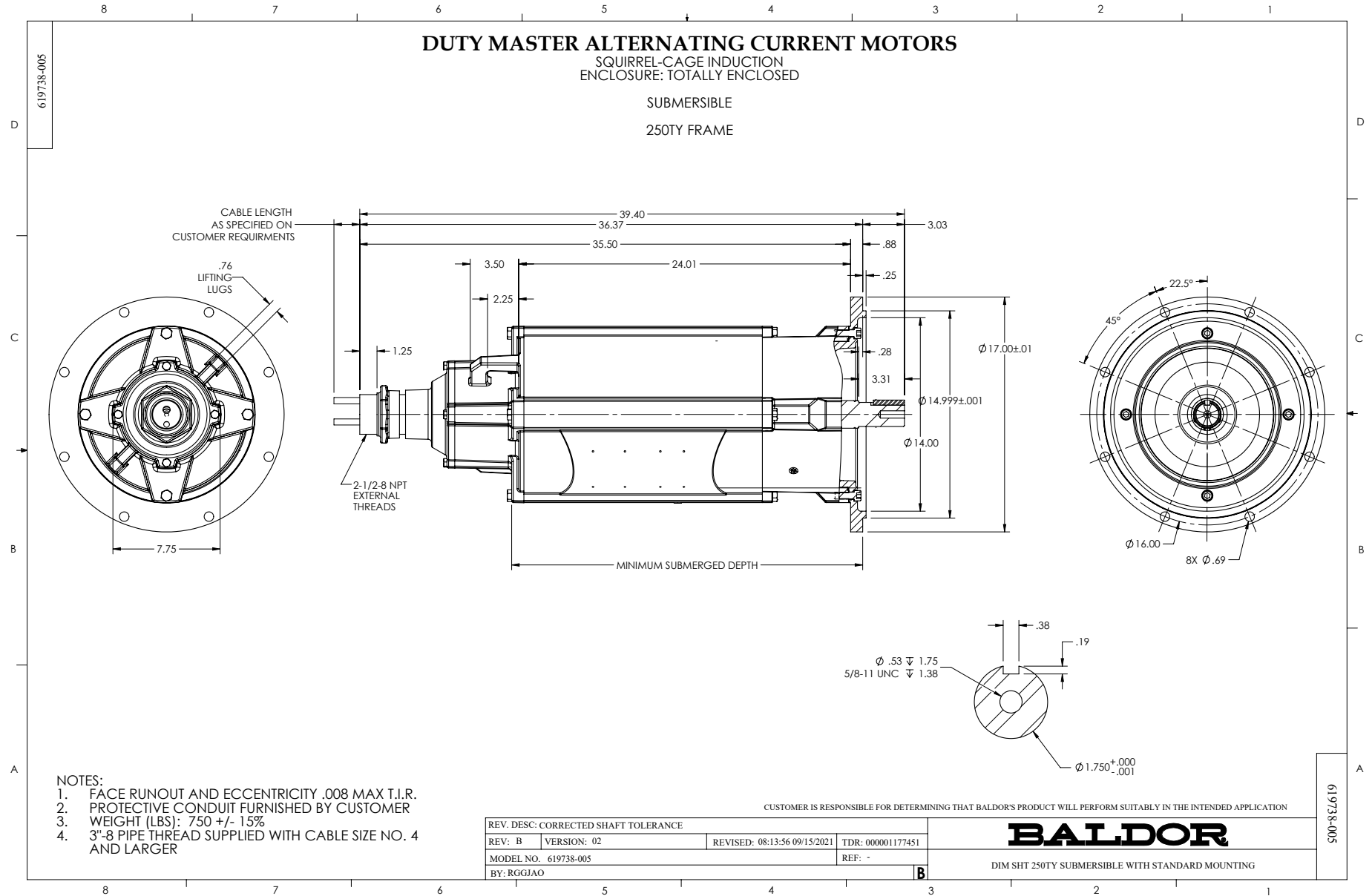
SPEED TORQUE / SPEED CURRENT CURVES



09WGA0211

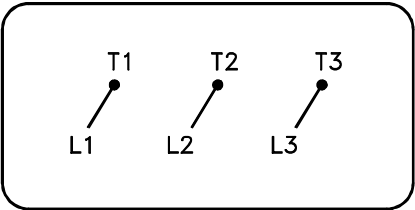
20HP 460V 60HZ





416820-036

A-C MOTOR
CONNECTION DIAGRAM
STANDARD 3 LEAD CONNECTED



(N.P. 1575-BA)

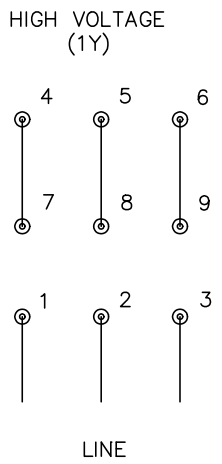
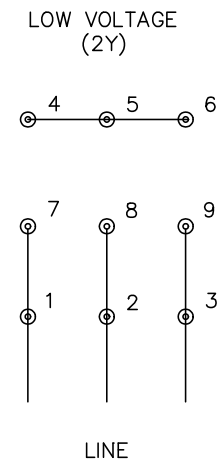
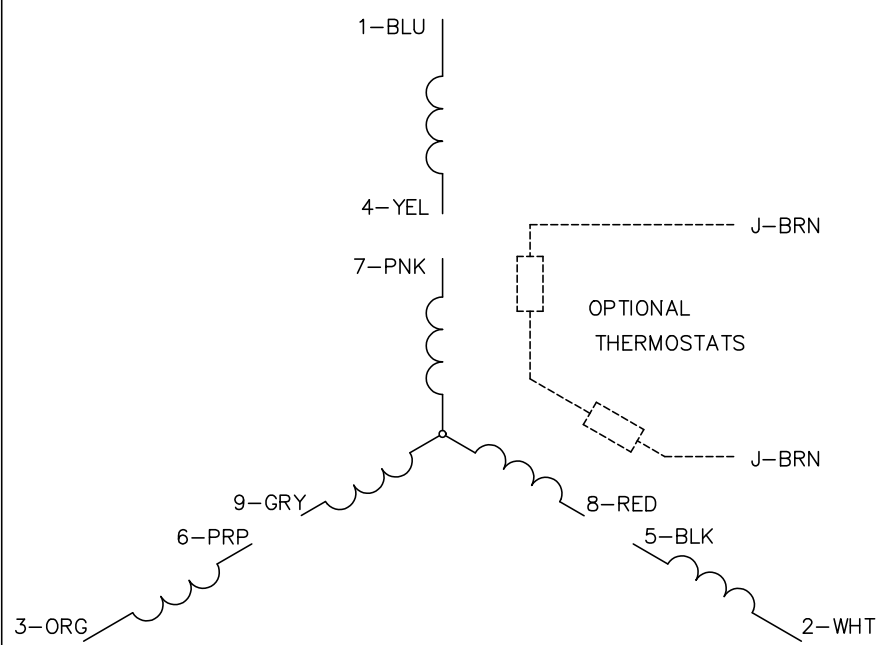
416820-036

REV. DESC: LOADED TO BUS, C/R 335225		
REV. LTR: -	VERSION: 00	TDR: 000000538207
FILE: \MGA\00000\682		REVISED: 11: 54: 06 04/30/2010
MTL: -		BY: RAGRA

BALDOR

CONN DIAG - STANDARD 3 LEAD
SH 1 of 1

CD0005



- NOTES:
- 1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
 - 2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
 - 3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
 - 4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

REV. DESC: REVISE TO SHOW OPTIONAL COLORS			
REV. LTR: E	BY: JLP	REVISED: 01/19/99 10:15	TDR: 0171435
S00000		FILE: AAA00005140	MDL: -
		MTL: -	

BALDOR ELECTRIC Co.

3PH, DV, 9 LEADS

CD0005